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Abstract

This paper examines the effect on economic development of whether a country's policy makers adopt a long-term vision. We use a novel institutional variable that indicates whether policy makers have a long-term strategic vision. However, the difficulty in estimating a causal effect is that long-term vision is endogenous to economic development. Therefore, we use the future-time reference language variables introduced in Chen (2013) as instrumental variables for long-term vision. To account for endogeneity, the paper conducts two stage least squares estimations where the language instruments are used in the first stage to find an exogenous source of variation in long-term vision. The results show that long-term vision, instrumented by future-time reference, explains cross country variations in economic development. These results are robust even after the inclusion of control variables and after the exclusion of outliers.

Keywords: institutions, culture, development.

JEL Classification: O10, H1

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1 Introduction

This paper examines the relationship between long-term vision and economic development. In other words, the paper explores the economic effects of whether a country's policy makers have a long-term strategic vision and whether they can induce public and private agents to act according to that vision. Adopting a long-term vision allows policy makers to be forward looking, allows decision makers to plan ahead for the future, allows agencies to act strategically, allows authorities to prepare in advance for future contingencies, and allows private agents to take economic actions today that have future payoffs such as saving, investment, innovation and accumulation of human capital. These actions are known to promote economic performance.

To measure long-term vision, the paper uses a novel estimate of institutional quality compiled in the Institutional Profiles Database. The variable is constructed from three questions: Do public authorities adopt a long-term strategic vision? Is this vision shared by society as a whole? Do authorities have the capacity to encourage public and private actors to act in alignment of this vision? The main contribution of our paper is that it is the first attempt in the literature to estimate whether this institutional indicator, that captures the adoption of long-term strategic vision, have an effect on economic development.

However, the key difficulty in determining a causal effect of long-term vision on economic development is that the former is endogenous to the latter. As much as long-term vision can influence the level of living standards, economic development can have an effect on whether agents and agencies in a country adopt a long-term vision as well. In more developed countries, agents are more likely to be forward looking and to plan ahead to preserve their high living standards, and authorities are more likely to take that into consideration in their policy making. Therefore, to identify a causal effect we have to find some exogenous source of variation in long-term vision. In other words, when we estimate the effect of long-term vision on economic development, we have to use instrumental variables. The instruments

used in this paper are the indicators for the linguistic characteristics of languages introduced in Chen (2013).

Chen (2013) examines whether speaking in a specific way about the future leads speakers to take future-oriented actions. The argument is that languages that grammatically separate the future and the present leads speakers to feel that the future is more distant. This would affect current economic behavior that has future consequences. On the other hand, some languages grammatically equate the present and the future. Those speakers would be more willing to prepare for a future which feels closer. Chen (2013) uses an indicator that linguists refer to as future-time reference (FTR) which indicates how languages mark the timing of events. The author separates languages into two categories: weak FTR languages which associate the present and the future, and strong FTR languages which separate the present from the future. For example, the German language allows for a rain prediction by saying "Morgen regnet es" which translates into "It rains tomorrow," while the English language requires the use of a future tense such as "It will rain tomorrow." Thus, the German language would be an example of weak FTR, while the English language would represent strong FTR. Chen (2013) finds that weak FTR languages that associate the future and the present influence speakers' intertemporal choices. The speakers of such languages save more, retire with more wealth, and adopt healthier lifestyles.

The findings of Chen (2013) was also supported by experimental evidence. Sutter et al. (2018) conduct an experiment to show that the language spoken by children is associated with their ability to wait for a future reward. The experiment is conducted in a bilingual Italian city where some children speak Italian, which grammatically separates the future and the present, while others speak German, which refers to the future by using the present tense. The authors find that German-speaking children are more likely than Italian-speaking ones to delay gratification in their experiment.

Thus, our paper's second contribution is to use the FTR language indicators as instru-

ments for long-term vision. The argument is that speakers of languages with weak FTR have a long-term future-oriented vision which, in turn, may have an impact on economic outcomes. We also do not expect that the level of economic development to have an effect on the characteristics of the language used in a country. Therefore, these indicators can serve as appropriate instruments.

The paper conducts ordinary least squares estimations to ascertain the effect of long-term vision on economic development. The results show that the adoption of a long-term vision has a statistically significant positive association with economic development. These results are robust even after the inclusion of additional control variables. To deal with potential endogeneity, the paper also conducts two stage least squares estimations. The second stage is a regression of economic development on long-term vision. In the first stage, future-time reference FTR is used as an instrument. The outcome of the analysis confirms that long-term vision, instrumented by the FTR language indicators, significantly explain cross country variations in economic development. These results are also robust after the inclusion of other control variables and after the exclusion of outliers. Finally, the paper explores the channels of transmission from long-term vision to economic development. The evidence shows that education and innovation serve as valid channels of transmission.

The remainder of the paper is organized as follows: section 2 discusses the literature survey, section 3 includes the detailed description of the data, section 4 includes the empirical estimation, and section 5 concludes. References, tables and figures are included thereafter.

2 Literature

There is a new burgeoning literature that examines the effect of certain linguistic characteristics on economic outcomes. Some of these studies focus on the differences between languages in terms of their use of future tense, gender marking, pronomial expression and

politeness distinctions.

Some studies focus on future time reference which is argued to have an effect on speaker's intertemporal choices, on long term orientation, on economic performance and on corporate decisions. For instance, Hubner and Vannoorenberghe (2015a) explore whether patience, proxied by measures of time discounting and long-term orientation, is a determinant of economic outcomes. Using weak FTR as an instrument, the authors provide evidence for a positive association between patience and output per worker, total factor productivity, innovation, and capital stock. Hubner and Vannoorenberghe (2015b) examine the effect of patience, instrumented by the FTR indicator, on inflation. The authors show that more patient countries have lower average inflation rates. Falk et al. (2018) also show that weak FTR is significantly positively correlated with patience and trust.

Galor and Özak (2016) examine the association between pre-industrial agro-climatic characteristics and the prevalence of long-term orientation today. The authors find a negative association between strong FTR and long-term orientation. Galor et al. (2017) find a favorable effect of speaking a language with periphrastic future tense, associated with long-term orientation, on college attendance. Figlio et al. (2019) study the role of long-term orientation, using FTR as one measure, on the educational attainment of immigrant students. The authors find that students from long-term oriented cultures perform better, have fewer absences and disciplinary incidents, are less likely to repeat a school year, are more likely to enroll in advanced courses, and are more likely to graduate from high school in four years.

Kim et al. (2017) argue that firms in countries with weak FTR languages are likely to engage in less earnings management whose future consequences are perceived to be more imminent. Their analysis confirms their prediction that firms in countries with weak FTR engage in less accrual-based and real earnings management than others. Fasan et al. (2016) find that firms headquartered in strong-FTR language countries are more likely to engage

in accrual and real activities earnings management to meet short-term earning benchmarks. Liang et al. (2014) find empirical support for the prediction that companies who use strong FTR languages as their official working language have less future orientation and perform worse in future-oriented actions such as corporate social responsibility.

There is also another literature that associates pronoun drop with economic and cultural outcomes. The pronoun drop reflects whether a language permits speakers to drop a personal pronoun when it is used as the subject of a sentence. Nonpronoun drop languages are expected to be associated with more individualistic cultures which is known to be positively associated with economic development as shown in Davis (2016), and Gorodnichenko and Roland (2011, 2017). In this context, Kashima and Kashima (1998, 2005) find that cultures with pronoun drop languages tend to be less Individualistic than those with nonpronoun drop languages. Davis and Abdurazokzoda (2016) show a statistically significant negative effect of the pronoun drop on individualism. Licht et al. (2007) examine the effect of cultural traits on institutions, such as the rule of law, corruption, and democratic accountability. The authors use pronoun drop as an instrument for cultural emphases on autonomy versus embeddedness. Their analysis shows a significant influence of culture, instrumented by the pronoun drop, on governance. Tabellini (2008) uses a composite linguistic variable incorporating pronoun drop and politeness form differentiation as an instrument to examine the connection between generalized morality and the quality of government. The author finds that countries where generalized morality is more widespread have better governance indicators.

Languages also differ in whether or not they require speakers to grammatically mark gender. The need to reference gender in languages is argued to influence personal preferences and public policies toward gender roles. Davis and Reynolds (2018) find that speaking a gendered language is associated with a greater gender gap in educational attainment. Gay et al. (2017) show that female immigrants who speak a language with sex-based

grammatical rules exhibit lower labor force participation, hours worked, and weeks worked. Mavisakalyan (2015) show that where the majority language is gender-intensive have lower women participation in the labor force, and a higher prevalence of gender-discriminatory attitudes. Givati and Troiano (2012) find that the more gender based pronouns a language has in a country, the shorter the maternity leave that a country provides. Pérez and Tavits (2019) find support for the proposition that speakers of genderless languages express attitudes leaning toward gender equality. Santacreu-Vasut et al. (2013) find that the pervasiveness of gender distinctions in grammar is the most significant determinant of gender political quota and female participation in politics.

There are other studies that investigate the effect of other linguistic features on economic outcomes. For instance, Desmet et al. (2012) explore the relationship between linguistic cleavages and a set of political economy outcomes. The authors find that deep cleavages, originating long time ago, are better predictors of conflict and redistribution. However, linguistic distinctions that have arisen more recently lead to better predictors of economic growth and the provision of public goods. Desmet et al. (2009) investigate the effect of linguistic diversity on redistribution across countries. Based on linguistic tree diagrams, the authors introduce distance between languages which is defined as one minus the proportion of shared branches between two languages out of the maximum number of branches between any two languages. The authors find that, once distance between languages is accounted for, linguistic diversity has a statistically significant negative effect on redistribution.

Compared to this literature, our paper's contribution is twofold. The paper is the first attempt in the literature to examine the effect on economic development of an institutional quality that captures the adoption of long-term vision by policy makers in a country. The second contribution is that it is the first attempt to use the linguistic characteristics of languages as an instrument for the institutional adoption of long-term vision.

3 Data

The countries included in the analysis are: Italy, Canada, Austria, France, Sweden, Israel, Finland, Netherlands, Spain, Iceland, Denmark, Argentina, Switzerland, Norway, Chile, Lithuania, Japan, Australia, Portugal, Croatia, Hungary, Poland, Germany, Ireland, United Kingdom, Slovak Republic, New Zealand, Estonia, Belgium, Russian Federation, Colombia, Turkey, Mexico, Czech Republic, Taiwan, Romania, Greece, Slovenia, Thailand, China, Malaysia, United States, Hong Kong, Bosnia and Herzegovina, Lebanon, Azerbaijan, China, Vietnam, Luxembourg, Republic of Moldova, and Angola. The sample is limited due to the availability of data. The data sources and the summary statistics of the variables used in the analysis are included in table 1.

The dependent variable is economic development which is proxied by real Gross Domestic Product per capita derived from the Penn World Tables version 8.0. The logarithm of real Gross Domestic Product per capita is used in the analysis.

3.1 Long-Term Vision

Long Term Vision is derived from the Institutional Profiles Database (IPD)[1] which is the outcome of a joint work between the Agence Française de Développement (AFD) and the French Ministry for the Economy and Finance (MEF). The IPD database provides estimates of the institutional characteristics of countries by compiling composite indicators developed from perception data. This project was designed to stimulate research on the relationship between institutions, long-term growth and economic development. We use the IPD 2012 database. A detailed description of the data is included in Bertho (2013).

The long-term vision variable is constructed from three questions: (1) "Do public authorities act on a long-term strategic vision?" (2) "Is this strategic vision shared by society as a whole?" (3) "Do public authorities have the capacity to encourage public and private

[1] http://www.cepii.fr/institutions/EN/ipd.asp

actors to act in the direction of this vision? (via tax and financial incentives, etc.)." For each question, respondents choose between five modalities, ranging from 0 (minimum score) to 4 (maximum score). The responses are, thus, discrete ordered variables. In order to ensure comparability over time, the variables that make up the indicators are aggregated by an unweighted arithmetic average. This provides us with the long-term vision LTV indicator that we use in this analysis.

The 2012 edition of the IPD questionnaire contained 330 questions designed to compile 130 indicators. The Institutional Profiles survey was sent to country and regional offices of the French Ministry for the Economy and Finance (MEF) in 143 countries. The questionnaire was also sent to the agencies of the Agence Française de Développement (AFD) that have a presence in 48 of those 143 countries. To complete the questionnaire, these two entities used their own knowledge but also called upon the knowledge of local expertise. In the 48 countries where both agencies have offices, they were asked to liaise with each other to produce a consolidated response. Given that this is perception data, considerable effort has been dedicated to limit the perception bias. The temporal and geographical consistency of the responses has been systematically checked. The questionnaire was sent out in March 2012, after which the responses had been checked and feedback was sent to the respondents in September 2012. The final data were collected by November 2012.

3.2 Instrument

The future-time reference FTR variable is based on a criterion adopted from the European Science Foundation's Typology of Languages in Europe (EUROTYP) project. Chen (2013) adopts the terminology of "weak-FTR" for languages that do not separate the present from the future, and call non-weak-FTR languages "strong-FTR." "Inflectional FTR" refers to the presence of any grammatical marking of the future events, even if it is not used frequently. A detailed description of the data is included in Chen (2013).

3.3 Controls

Several control variables are used in the analysis to check the robustness of the results. These are institutional, geographic, cultural and integration indicators that have been identified in the literature as confounding factors that explain the variations in the level of economic development.

Institutional quality is known to have a significantly favorable effect on economic outcomes. Ample evidence is provided in Knack and Keefer (1995, 1997), Acemoglu and Johnson (2005), Acemoglu et al. (2001), Rodrick et al. (2004), Asongu and Kodila-Tedika (2018) and others. For institutional quality, we use the principal component of the variables: voice and accountability, political stability/no violence, government effectiveness, regulation quality, corruption-control and rule of law. This indicator is derived from Kauffman et al. (2007) and the Worldwide Governance Indicators. We also include the legal origin indicators which are compiled by La Porta et al. (1999). The list[2] includes the British common law, the French civil law, the Socialist law, the German civil law, and the Scandinavian law. The authors argue that the legal tradition in countries implanted by colonial powers has profoundly shaped national approaches to property rights protection and the degree to which the state intervenes in the economy. Accordingly, the legal origin is expected to have a significant influence on economic development. We also use a dummy variable for countries with a communist past which is expected to have a negative effect on economic development.

We include schooling or educational attainment, which is measured by the average years of schooling amongst the population aged 15 and over. This is derived from the international educational attainment data set in Barro and Lee (2010). Some studies include education in income regressions as in Easterly and Levine (2016). We also include cultural and linguistic indicators such as individualism from Hofstede (2001), and the pronoun drop from Dryer

[2] http://scholar.harvard.edu/schleifer/publications/quality-government

(2011). Our literature survey refers to some studies that find an association between these cultural indicators and economic development.

We also include geographic variables such as the historical pathogen prevalence from Fincher et al. (2008), a dummy if the country is landlocked and mean temperature from Michalopoulus and Ashraf (2015). Gallup et al. (1999) show that location and climate have large effects on income levels.

Another control variable used is openness which is proxied by (Exports + Imports)/GDP derived from the World Development Indicators. There are several studies that provide evidence for the effect of openness on economic outcomes such as Sachs and Warner (1995), Dollar and Kraay (2003, 2004), Frankel and Romer (1999), and others. Finally, the analysis also includes continental dummies for Africa, Asia, Europe, Oceania, and the Americas.

4 Estimation

4.1 Baseline Results

This section empirically estimates the effect of long-term vision on economic development as follows

$$RGDP_i = \alpha + \beta LTV_i \ + X_i\gamma + \varepsilon_i \tag{1}$$

where $RGDP_i$ is the logarithm of real Gross Domestic Product per capita in country i. LTV_i is long-term vision in country i, and X_i is a vector of control variables. The purpose of the equation, which is estimated by Ordinary Least Squares, is to assess if long-term vision is associated with economic development. Figure 1 shows a positive association between the logarithm of real GDP per capita and long-term vision. Table 2 includes the baseline results. The results without any control variables is included in column 1. We

add schooling in column 2, the communist indicator in column 3, openness in column 4, institutional quality in column 5, and the continental dummies in column 6. The results show that long-term vision has a statistically significant positive association with economic development. This result is robust even after the inclusion of control variables such as educational attainment, institutional quality, openness, whether the country has a communist past, and the continental dummies. It is worth noting that as we include more control variables, the size and the significance of the coefficient of long-term vision diminish. The last column that includes all the control variables show a statistically significant coefficient of 0.182. This implies that a one standard deviation increase in long-term vision translates into an increase in the logarithm of real GDP per capita by 0.141.

As expected, schooling has a significantly positive association with economic development. On the other hand, the communist indicator has a statistically significant negative coefficient. The openness and institutional indicators, however, do not have statistically significant effects on economic development. The insignificant effect of the institutional indicator could be attributed to the fact that the institutional qualities that are essential for economic performance are already captured in our long-term vision institutional variable. The insignificant coefficient of openness is consistent with the findings of Dollar and Kraay (2003) who argue that the effect of trade and institutions on economic outcomes is uninformative because of the high correlation between these two variables.

4.2 Controlling for Outliers

In order to detect and deal with possible outliers, our empirical estimation follows the iteratively reweighted least squares estimation developed by Huber (1973) and the MM-estimator proposed by Yohai (1987). These techniques are used to mitigate the effect of outliers. The results after controlling for the outliers are included in table 3 in columns 1 and 2, respectively. The evidence shows a statistically significant positive effect of long-term

vision on economic development. We also use the procedure proposed by Hadi (1992) to detect and control for outliers. The following outliers are detected and excluded, namely: Hong Kong. The results in column 3 of table 3 show that, controlling for outliers, long-term vision has a statistically significant positive association with economic development. This implies that these different corrections do not affect the results found so far. In different terms, the outliers have no real impact on the direction, sign or significance of the relationship of interest.

4.3 Potential Endogeneity

Given the potential endogeneity problem, a two stage least squares regression is conducted to address the question of whether long-term vision, instrumented by the FTR indicator, has an effect on economic development. The two stage estimation equations are as follows

$$\text{Second Stage: } RGDP_i = \alpha + \beta LTV_i + X_i\gamma + \varepsilon_i \tag{2}$$

$$\text{First Stage: } LTV_i \ = \delta FTR_i + \epsilon_i \tag{3}$$

The error terms in the first and second stage regressions are ε_i and ϵ_i, respectively. The FTR_i variables are considered excluded exogenous variables in that they are used as instrumental variables to extract the exogenous component of LTV_i but are excluded in the second stage. Table 4 shows the coefficients of the second stage of the two stage least squares. Column 1 shows the results of the entire sample, while column 2 shows the results after the exclusion of the outliers. The results show that the exogenous component of long-term vision significantly explains economic development even after the inclusion of the control variables and with the exclusion of the outliers. It is worth noting that the size and significance of the coefficient of the long-term vision variable improved in the two stage least squares estimation compared to the ordinary least squares estimation. The two stage

least squares estimation show a statistically significant coefficient of 0.405 for long-term vision. This implies that a one standard deviation increase in long-term vision translates into an increase in the logarithm of real GDP per capita by 0.315.

It is worth mentioning that for the instrument to be valid, it should affect economic development through its impact on long-term vision and not through any other channel. To address the exclusion restriction, we control for alternative channels through which the instrument can affect economic development, other than through long-term vision. Some of the key channels would be schooling and institutional quality. Forward looking societies will invest more in human capital and will improve the quality of their institutions. As shown in table 4, the results are robust even after we control for these variables. Another way to deal with this issue is to conduct tests of overidentifying restriction which has as its null hypothesis that FTR does not explain the logarithm of real Gross Domestic Product per capita beyond the ability of FTR to explain long-term vision. In this context, the overidentifying restriction tests, included in table 4, do not reject the hypothesis that the instruments can be excluded from the second stage regression. This implies that the FTR can not explain cross country variations in economic development beyond their ability to explain cross country variations in long-term vision that is conducive to economic development.

4.4 Additional Controls

To test the robustness of our results, we add other control variables that are identified in the literature as determinants of economic development. Thus, we add to our baseline estimations individualism, the pronoun drop, mean temperature, historical pathogen prevalence, legal origins, and a dummy if the country is landlocked. The estimations are included in table 5. The results show that our previous findings are robust as the coefficient of long-term vision is statistically significant and positive in all specifications, except in the last column

when we include the legal origin. This could be attributed to the fact that institutional long-term orientation could be incorporated into the legal system adopted by the country.

In table 6, we include combinations of control variables that have been considered in some previous studies. In column 1 of table 6, we include the control variables included in Gorodnichenko and Roland (2017). The list of controls include a dummy for landlocked countries, the percentage of population practicing the major religion in a country, and absolute values of countries' longitude and latitude. In column 2 of table 6, we include the list of controls in Ashraf and Galor (2013) which include log percentage of arable land, log absolute latitude, log land suitability for agriculture and a continental dummy. In column 3 of table 6, we add the list of controls in Easterly and Levine (2016) which include the legal origin, independence and ethnicity. The results in table 6 confirm our previous findings as long-term vision has a statistically significant and positive association with economic development in all specifications.

It is also worthnoting that the overidentifying restriction tests, included in tables 5 and 6, imply that the FTR can not explain cross country variations in economic development beyond their ability to explain cross country variations in long-term vision that is conducive to economic development.

4.5 Channels of Transmission

Finally, we explore the channels of transmission from long-term vision to economic development. We consider possible transmission through the channels of education, innovation and investment. The intuition is that if policy makers adopt a long-term vision, they are more likely to invest in human capital, physical capital and technological progress. Table 7 includes the results where the dependent variable is schooling in column 1, innovation in column 2 and investment in column 3. Educational attainment is measured by the average years of schooling amongst the population aged 15 and over. We use the number of tele-

phone subscriptions per 1,000 population to proxy for infrastructure development, which is essential for investment. This variable is derived from the World Development Indicators. We also use the number of researchers in R&D per million as a proxy for innovation. This variable is also derived from the World Development Indicators. Table 7 shows that long-term vision has a statistically significant positive effect on education and innovation, but the effect on investment is insignificant. This implies that when policy makers adopt a long-term vision they are more likely to invest in human capital and to spend on research and development.

5 Conclusion

This paper examines the effect of the adoption of long-term vision of policy makers on economic development. The results of ordinary least squares estimations show that the adoption of a long-term vision has a statistically significant positive association with economic development. These results are robust even after the inclusion of control variables. However, the key difficulty in estimating a causal effect is that long-term vision is endogenous to economic development. Therefore, we have to use instrumental variables. The instruments used are the FTR language variables introduced by Chen (2013). To deal with potential endogeneity, the paper conducts two stage least squares estimations. The results show that long-term vision, instrumented by the linguistic characteristics indicators, explains cross country variations in economic development. These results are also robust even after the inclusion of additional control variables that are identified by the literature as determinants of economic development, and after the exclusion of outliers. The paper also finds that the effect of long-term vision on economic development goes through the channels of education and innovation. Future research can distinguish and compare between the economic effects of long-term vision of policy makers with that of the population. A

comparison between the effects of the two is warranted in order to determine which matters more especially in cases when the two do not coincide.

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Variable	Observations	Mean	Standard Deviation	Min	Max	Source
GDP per capita	50	9.790	0.747	8.088	11.173	Feenstra et al. (2015)
LTV	49	2.599	0.779	1	4	Bertho (2013)
Schooling	46	9.940	1.612	5.747	12.749	Barro & Lee (2010)
Communist	47	0.298	0.462	0	1	Authors
Openness	50	103.508	64.200	26.933	384.865	WDI
Institutions	51	1.531	2.401	-3.364	4.592	Kauffman et al. (2007)
Africa	52	0.038	0.194	0	1	Authors
Americas	52	0.115	0.323	0	1	Authors
Asia	52	0.231	0.425	0	1	Authors
Europe	52	0.577	0.499	0	1	Authors
Oceania	52	0.038	0.194	0	1	Authors
Individualism	45	51.355	23.025	13	91	Hofstede (2001)
Historical Pathogen	45	-0.3284	0.67	-1.31	1.03	Fincher et al. (2008)
Pronoun drop	47	0.595	0.4960	0	1	Dryer (2011)
Legor_UK	51	0.196	0.401	0	1	La Porta et al. (1999)
Legor_FR	51	0.294	0.460	0	1	La Porta et al. (1999)
Legor_SO	51	0.313	0.468	0	1	La Porta et al. (1999)
Legor_GE	51	0.098	0.300	0	1	La Porta et al. (1999)
Legor_SC	51	0.098	0.300	0	1	La Porta et al. (1999)
Landlock	52	0.153	0.364	0	1	Authors
Mean Temperature	22	14.896	8.665	-7.633	26.114	Michalopoulus & Ashraf (2015)

Table 1: Statistical Summaries

	I	II	III	IV	V	VI
LTV	0.388***	0.274***	0.213***	0.205***	0.159**	0.182**
	(0.094)	(0.076)	(0.068)	(0.068)	(0.077)	(0.077)
Schooling		0.218***	0.195***	0.193***	0.180***	0.171***
		(0.046)	(0.037)	(0.037)	(0.039)	(0.032)
Communist			-0.592***	-0.609***	-0.547***	-0.761***
			(0.107)	(0.109)	(0.115)	(0.100)
Openness				0.001	0.001	0.001
				(0.001)	(0.001)	(0.001)
Institutions					0.046	0.001
					(0.033)	(0.026)
Continental	No	No	No	No	No	Yes
Constant	8.775***	7.014***	7.579***	7.544***	7.710***	7.614***
	(0.251)	(0.432)	(0.369)	(0.372)	(0.397)	(0.402)
Observations	48	44	43	43	43	43
R-squared	0.176	0.551	0.718	0.725	0.747	0.838

Table 2: Ordinary Least Squares Estimations.

Dependent variable: Real GDP per capita

Standard errors are corrected for heteroskedasticity

0.01 significance ***; 0.05 significance **; 0.1 significance *

	IRWLS	MM	Hadi
LTV	0.183***	0.143**	0.175**
	(0.065)	(0.064)	(0.079)
Schooling	0.176***	0.204***	0.178***
	(0.030)	(0.030)	(0.033)
Communist	-0.786***	-0.813***	-0.715***
	(0.117)	(0.069)	(0.094)
Open	0.001	-0.001**	-0.000
	(0.001)	(0.000)	(0.001)
Institutions	-0.002	0.001	0.004
	(0.028)	(0.024)	(0.023)
Continental	Yes	Yes	Yes
Constant	7.572***	7.436***	7.618***
	(0.412)	(0.399)	(0.386)
Observations	43	43	42
R-squared	0.818		0.858

Table 3: Controlling for Outliers

Dependent variable: Real GDP per capita

0.01 significance ***; 0.05 significance **; 0.1 significance *

	2SLS	2SLS without outliers
LTV	0.405**	0.399**
	(0.193)	(0.189)
Schooling	0.152***	0.158***
	(0.031)	(0.033)
Communist	-0.747***	-0.705***
	(0.086)	(0.086)
Open	0.002*	-0.000
	(0.001)	(0.001)
Institutions	-0.033	-0.030
	(0.034)	(0.033)
Continental	Yes	Yes
Constant	7.345***	7.349***
	(0.437)	(0.421)
Observations	43	42
R-squared	0.773	0.790
Kleibergen-Paap rk LM statistic (p-value)	0.130	0.130
Cragg-Donald Wald F statistic	0.939	0.908
Hansen J statistic (p-value)	0.949	0.951
Tests of overidentifying restrictions:		
Sargan N*R-sq test (p-value)	0.929	0.952
Basmann test (p-value)	0.947	0.965

Table 4: Two Stage Least Squares Estimation

Dependent variable: Real GDP per capita

Instruments: FTR, inflectional FTR

0.01 significance ***; 0.05 significance **; 0.1 significance *

	I	II	III	IV
LTV	0.304*	0.234**	0.478*	0.177
	(0.168)	(0.105)	(0.255)	(0.129)
Individualism	-0.000			
	(0.004)			
Pronoun Drop		-0.045		
		(0.139)		
Mean Temperature		-0.071		
		(0.058)		
Historical Pathogen		0.854		
		(0.907)		
Landlock			0.159	
			(0.164)	
Legal Origin	No	No	No	Yes
Basline Controls	Yes	Yes	Yes	Yes
Constant	7.537***	9.480***	7.238***	7.808***
	(0.416)	(2.040)	(0.516)	(0.466)
Observations	39	14	43	43
R-squared	0.830	0.959	0.706	0.846
Kleibergen-Paap rk LM statistic (p-value)	6.325	3.540	4.695	0.227
Cragg-Donald Wald F statistic	0.613	1.296	0.807	1.096
Hansen J statistic (p-value)	0.536	0.004	0.500	0.402
Tests of overidentifying restrictions:				
Sargan N*R-sq test (p-value)	0.660	0.004	0.875	0.500
Basmann test (p-value)	0.746	0.098	0.908	0.617

Table 5: Additional Control Variables

Dependent variable: Real GDP per capita

0.01 significance ***; 0.05 significance **; 0.1 significance *

	I	II	III
LTV	0.226*	0.753***	1.065***
	(0.116)	(0.269)	(0.410)
Control Variables	Gorodnichenko	Ashraf	Easterly
	& Roland (2017)	& Galor (2013)	& Levine (2016)
Constant	7,206***	7.961***	7.017
	(1.697)	0.834	1.225
Observations	47	45	45
R-squared	0.936	0.997	0.993
Kleibergen-Paap rk LM statistic (p-value)	0.163	0.033	0.058
Cragg-Donald Wald F statistic	1.494	2.123	2.707
Hansen J statistic (p-value)	0.850	0.636	0.140
Tests of overidentifying restrictions:			
Sargan N*R-sq test (p-value)	0.691	0.636	0.289
Basmann test (p-value)	0.799	0.705	0.330

Table 6: Additional Control Variables in the Literature

Dependent variable: Real GDP per capita

0.01 significance ***; 0.05 significance **; 0.1 significance *

	Schooling	Innovation	Investment
LTV	0.605***	348.940*	3.162
	(0.207)	(200.157)	2.329
Continental Effect	Yes	Yes	Yes
Constant	6.638***	292.175	1.971
	(0.574)	(628.306)	4.020
Observations	113	80	93
R-squared	0.561	0.115	0.082

Table 7: Channels of Transmission

0.01 significance ***; 0.05 significance **; 0.1 significance *

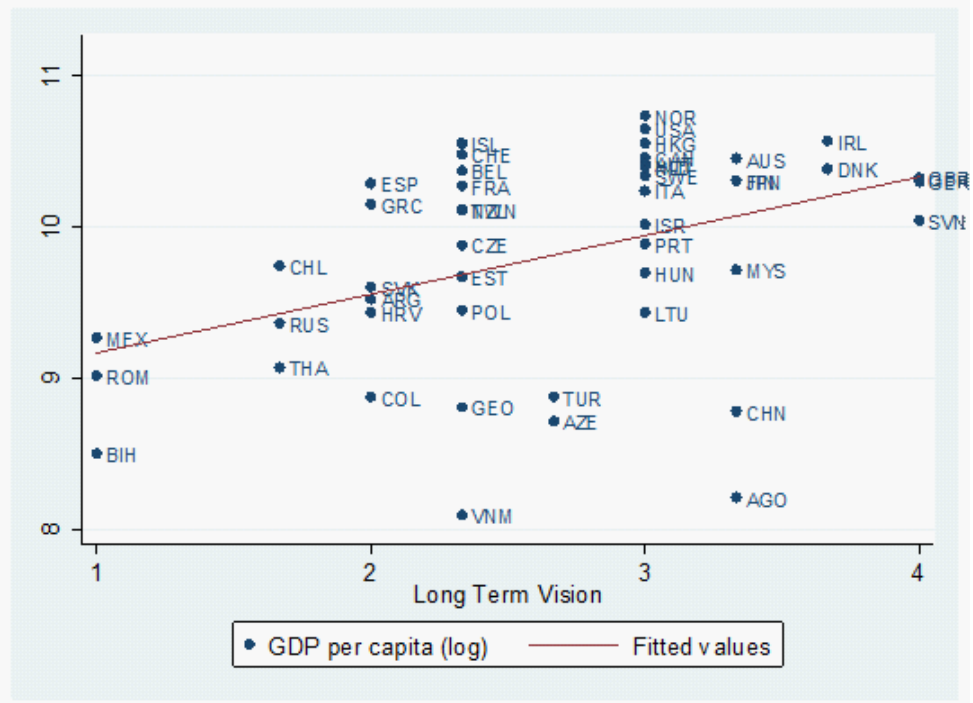

Figure 1: Long-term vision and the logarithm of real GDP per capita.